UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,681	04/09/2004	Karl Schrodinger	INFMN-020	1358

52612 7590 09/22/2005

BEVER, HOFFMAN & HARMS, LLP
1432 CONCANNON BLVD
BUILDING G
LIVERMORE, CA 94550-6006

EXAMINER	
FLANAGAN, KRISTA M	
ART UNIT	**PAPER NUMBER**
2817	

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/821,681	SCHRODINGER, KARL	
	Examiner	Art Unit	
	Krista M. Flanagan	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *18-21* is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 April 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9 April 2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Figure 1 - s_a' and – s_a'.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "210" has been used to designate both the switching transistor of figure 2 and the "1" curve of figure 4. Also, reference character "220" has been used to designate both the second switching transistor of figure 2 and the "2" curve of figure 4.

3. The drawings are objected to because

   a. The lead line for reference character 100 in figure 1 is not showing what is detailed in the specification.

   b. The photodiode in figure 3 is missing a label.

   c. The resistor R_c in figure 3 is missing a label.

4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the

renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

6. The abstract of the disclosure is objected to because the abstract of the disclosure is not present on a separate sheet apart from any other text. Applicant is asked to please omit the title of the invention and the inventor's name from the sheet. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-17 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,933,786 to Mohandas et al.

8. Regarding claims 1 and 17, Mohandas disclose a light optical detector or photodiode, 12, which is coupled to an amplifier system, 10. The amplifier system includes control circuit, 16, that receives input from the photodiode to control a gain of an amplifier, 18, and an impedance circuit, 20. The control circuit, 16, can select between a first and second range. This

configuration is disclosed in figure 1 and in the corresponding text at column 1, line 57 through column 2, line 26, specifically at column 1, line 62 through column 2, line 13.

9. Regarding claims 2 and 8, which inherit all of the limitations of claim 1, Mohandas disclose an amplifier, 18 which includes an input transistor, 46. Input transistor, 46, is coupled to gain adjustment resistor, 56. Gain adjustment resistor, 56, is coupled to switch, 58, which is coupled to the first range from the control circuit, 16. The value for the gain adjustment resistor, 56, is calculated based on the first range from the control circuit, 16, and the transconductance of the input transistor, 46. This configuration is disclosed in figure 2 and in the corresponding text at column 2, lines 26-52.

10. Regarding claim 3, which inherits all of the limitations of claim 2, Mohandas disclose an amplifier, 18 which includes an input transistor, 46. Input transistor, 46, is coupled to controllable current source, 62. Controllable current source, 62, adjusts the current to the transistor, 46 therefore adjusting the gain of the amplifier, 18. This configuration is disclosed in figure 3 and in the corresponding text at column 2, line 53 through column 3, line 3.

11. Regarding claim 4, which inherits all of the limitations of claim 3, Mohandas disclose an amplifier system, 18, where the circuit, 44, for controlling the operating point of the amplifier is coupled between the input transistor, 46, and the ground.

12. Regarding claims 5, 6 and 7, Mohandas disclose an amplifier system, 18, which comprises a controllable input impedance circuit, 20, formed by a variable feedback resistance. The variable feedback resistance includes a first and second resistor, 26 and 30, coupled to a first and second switch, 28 and 32, respectively. The control circuit, 16, controls the switches. The switches are not specifically disclosed as transistors but it is well known in the art that transistors

are frequently used in such capacity. This configuration is disclosed in figure 1 and in the corresponding text at column 1, line 57 through column 2, line 26, specifically at column 1, line 67 through column 2, line 13.

13. Regarding claim 9, which inherits all of the limitations of claim 8, Mohandas disclose an amplifier system, 10, where the control circuit controls a gain of a trans-impedance amplifier, 18 as discussed in column 1, lines 62-65.

14. Regarding claims 10-12, Mohandas disclose an amplifier system, 10, which includes an impedance circuit, 20 formed by a variable feedback resistance which influences the internal gain of the amplifier. When the gain of the amplifier is changed the impedance is adjusted to maintain constant input impedance. See corresponding text at column 1, line 67 through column 2, line and column 3, lines 29-37.

15. Regarding claims 13-16, Mohandas disclose an amplifier system, 18, which comprises a controllable input impedance circuit, 20, formed by a variable feedback resistance. The variable feedback resistance includes a first and second resistor, 26 and 30, coupled to a first and second switch, 28 and 32, respectively. The control circuit, 16, controls the switches. When the gain of the amplifier is changed the impedance is adjusted to maintain constant input impedance. The switches are not specifically disclosed as transistors but it is well known in the art that transistors are frequently used in such capacity. This configuration is disclosed in figure 1 and in the corresponding text at column 1, line 57 through column 2, line 26, specifically at column 1, line 67 through column 2, line 13.

Allowable Subject Matter

16. Claims 18-21 are allowed.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. US Patent No. 6,943,630 to Forsberg discloses an amplifier circuit an optical communication system and a method of controlling amplification.

b. US Patent Application No. 2005/0052248 to Visocchi discloses an elevated front-end trans-impedance amplifier.

c. US Patent Application No. 2005/0046482 to Schrödinger discloses a receiver circuit having an optical reception device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krista M. Flanagan whose telephone number is (571) 272-2203. The examiner can normally be reached on Monday - Friday, 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on (571) 272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

K. Flanagan
20050918

PATRICIA NGUYEN
PRIMARY EXAMINER

Patricia Nguyen